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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/658,395	09/08/2000	James Bryer	257/040 P00-0022	3427

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PERKINS COIE LLP
POST OFFICE BOX 1208
SEATTLE, WA 98111-1208

EXAMINER

EL ARINI, ZEINAB

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 06/24/2003

Handwritten signature/initials

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/658,395

Applicant(s)

BRYER, JAMES

Examiner

Zeinab E. EL-Arini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,6,9-16 and 21-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,6 and 9-16 is/are allowed.
- 6) ☒ Claim(s) 21-25,28,30,32 and 33 is/are rejected.
- 7) ☒ Claim(s) 26,27,29 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935): Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 4/14/03 has been entered.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: On page 26, lines 10-11, "wall 456-----, as shown in Figs. 5 and 16" has been cited, however Fig. 5 does not include "456". It is suggested that "5" be changed to read "15". At line 17, "450" has been disclosed, however Fig. 5 does not include "450". A proposed drawing correction or corrected drawings are required in reply to the Office

action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Allowable Subject Matter

3. Claims 1, 3, 6, and 9-16 are allowed.
4. Claims 26- 27, 29, and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 21-23, 28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shortes et al. (4,027,686).
7. Shortes et al. teach a method and apparatus for cleaning the surface of a semiconductor material through the use of liquid spray, wherein the liquid spray is delivered at an angle to the exposed surface of a rotating semiconductor material. The apparatus comprises a housing, an upstanding pedestal having a slice- supporting surface on which the slice of

semiconductor material to be cleaned is disposed. The pedestal is mounted within the housing, which includes a motor for imparting rotation to the pedestal. The apparatus also includes a spray nozzle for spraying a cleaning liquid onto the exposed surface of the slice. The reference also teaches the spray means includes more than one angle spray nozzle. See col. 7, lines 26-50, the abstract, Figs. 4, and 6-7, col. 9, lines 10-15, and the claims.

8. Shortes et al. do not teach cleaning boxes as claimed.

9. It would have been obvious for one skilled in the art to use the method and apparatus taught by Shortes et al. for cleaning boxes, because Shortes et al. disclose that the technique disclosed herein in general is applicable in cleaning the surface of any article where even minutely-sized particles retained thereon as debris would be detrimental. See col. 9, lines 10-15.

10. Claims 21-25, 28, 30, and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryer et al. (6,432,214) in combination with Shortes et al.

Bryer et al. teach a method and apparatus for cleaning wafer carriers. The apparatus comprises a rotor rotatably mounted within a chamber, and nozzles within the chamber to spray cleaning liquid on the rotor. See the abstract, col. 2, lines 20-24, col. 3, lines 35-57, col. 5, lines 30-59. Bryer et al. teach all limitation with the exception of the spray means includes an angle spray nozzles.

Shortes et al. as discussed supra teach using angle spray nozzles for cleaning any article.

It would have been obvious for one skilled in the art to use the angle spray nozzles taught by Shortes et al. in the system taught by Bryer et al. to enhance and improve the cleaning process. This is also because both references are from the same technical endeavor which cleaning the substrate by using liquid spray.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeinab E. EL-Arini whose telephone number is (703) 308-3320. The examiner can normally be reached on Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (703) 308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9310 for regular communications and (703)872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Zeinab EL-Arini
Zeinab E. EL-Arini
Primary Examiner
Art Unit 1746

ZEE

June 19, 2003